REMARKS

Reconsideration of the pending application is respectfully requested on the basis of the following particulars:

Rejection of claims 1 and 3-5 under 35 U.S.C. § 103(a)

Claims 1 and 3-5 presently stand rejected as being unpatentable over Poppe (U.S. 4,194,255) (Poppe '255) in view of Contreras (U.S. 5,797,154), Giori et al (U.S. 6,684,433), Kuczynski et al (U.S. 5,989,699), and Shalon et al (U.S. 6,309,891). This rejection is respectfully traversed for the following reasons.

The cited references (Poppe, Contreras, Giori, Kuczynski, and Shalon), separately or in combination, fail to disclose or suggest each and every element set forth in claim 1 of the present application. Furthermore, there is no motivation or suggestion among these references for their combination in a manner to arrive at the presently claimed invention.

According to claim 1 of the present application, a method for manufacturing a tubular, resilient body comprises steps of: 1) providing slits in a foam layer; 2) cutting a strip out of the slitted foam layer; and 3) bending two opposite ends of the strip towards each other; and fixing both opposite ends in order to form a tubular, resilient body. The foam layer is made of a viscoelastic foam, and at least a part of the cells present in the foam are broken open by compressing the foam such that a gas pressure within the cells rises to burst the cells.

The examiner notes that Poppe '255 is silent on a step of cutting the strip out of a foam layer that has slits. Finding Poppe '255 lacking in a teaching or suggestion of cutting the strip out of a foam layer that has slits, the examiner turns to Contreras and asserts that because Contreras teaches cutting a pillow structure from a larger slab of cushioning material, "one skilled in the art would have readily appreciated cutting the block out of the foam layer or having the block already prepared to the correct dimensions as they are both conventional ways to obtain the foam strip required to make the tubular, resilient bodies and are obvious alternate expedients."

The examiner also opines that "one skilled in the art would have also readily appreciated that the slits could be provided in the foam layer prior to cutting or they could be provided in the strip (block), after being cut to the desired dimensions, since they are alternate expedients obvious over one another and both result in the same material for the tubular, resilient body."

However, neither Poppe '255 nor Contreras provide any basis for the examiner's assertions. On the contrary, Contreras simply teaches that a single contoured pillow may be completely formed by the single step of cutting the pillow from a slab of cushioning material, by molding the pillow structure, or by forming the pillow in a compression process. (see Contreras; col. 3, lines 25-33). In each case, the result of the process (cutting, molding, or compressing) is a single finished pillow. Accordingly, Contreras fails to disclose or suggest cutting a strip from a foam layer (which is prepared by the formation of slits) wherein the strip is to be subsequently further formed into a tubular resilient body.

In contrast, according to the present invention a foam layer is prepared by the formation of slits, a strip is cut from the foam layer (not a finished pillow), and a tubular, resilient body is then formed by bending two opposite ends of the strip towards each other; and fixing both opposite ends in order to form the tubular, resilient body. Clearly, the claimed method enables the production of multiple tubular resilient bodies from a single prepared foam layer, with the advantages of reduced manufacturing steps (since the foam layer may be prepared with the formation of slits in a single step) and uniformity of the slits (and therefore the pattern of openings in each tubular resilient body formed from the strips cut from the foam layer).

Contreras provides no teaching or suggestion that the contoured pillow, formed by various processes, is suitable for further formation into a tubular, resilient body. Accordingly, there is no motivation or suggestion to apply any of the methods of Contreras in a method for forming a foam spring as set forth in Poppe '255.

The examiner also notes that Poppe '255 is silent on the use of viscoelastic foam. Finding Poppe '255 lacking any teaching or suggestion of the use of viscoelastic foam, the examiner turns to Giori and asserts that it would have been obvious to use viscoelastic foam as suggested by Giori. However, it must be recognized that the references to viscoelastic foam that the examiner cites in Giori discus numerous ***disadvantages*** of the use of viscoelastic foam, relating to the high density of the viscoelastic foam and other problems.

Giori, in fact, teaches the use of low density foam as a ***substitute to overcome the disadvantages of*** viscoelastic foams. The invention set forth by Giori "preferably features a self-inflatable, resilient open celled foam composed of polyurethane or a similar material." (*Giori*; col. 8, lines 32-34). Accordingly, Giori ***teaches away from*** the use of a viscoelastic foam, and therefore provides no motivation or suggestion to modify Poppe '255 by the use of viscoelastic foam.

The examiner further notes that Poppe '255 is silent on a step of compressing foam such that gas pressure within the cells rises to burst at least a part of the cells. Finding Poppe '255 lacking any teaching or suggestion of a step of compressing foam such that gas pressure within the cells rises to burst at least a part of the cells, the examiner turns to Kuczynski, and asserts that Kuczynski discloses that "it is well known in the art to compress a foam such that cells in said foam are opened."

However, Kuczynski does not disclose or suggest any use of a viscoelastic foam, and thus fails to disclose or suggest that any cited method for opening cells (of a TDI-based polyurethane foam) is useful or applicable in a viscoelastic foam. Furthermore, while Kuczynski states that "when such a TDI_based system is used, the cells of the foam in the finished padded element must be substantially open," Kuczynski fails to state why the cells in this alternative (and not preferred) embodiment must be open. Indeed, there is no such requirement in a preferred embodiment that uses an MDI-based polyurethane foam.

Thus, a person of skill in the art would lack any guidance, based on the teachings of Kuczinski, regarding the expected outcome of applying any method for opening cells in a viscoelastic foam, since Kuczinski does not teach or suggest either the use of the viscoelastic foam or any result of, or reason for, opening cells in the TDI-based polyurethane foam.

Referring to Contreras, which discusses the use of a slow-recovery or viscoelastic foam, there is no teaching or suggestion that the viscoelastic foam may be altered in any manner. There is no motivation or suggestion set forth in Contreras to modify the viscoelastic foam by opening cells as set forth in the claimed invention, which is noted in the present application to provide improved air circulation and allow the foam to spring in a softer manner. There is no teaching or suggestion that these results of such a modification of the viscoelastic foam would be desirable in Contreras' pillow. On the contrary, it is respectfully submitted that the improved air circulation that results from the opened cells would operate ***counter to*** a stated benefit of the unaltered viscoelastic foam of retaining heat (see Contreras; col. 3, line 21), and therefore Contreras teaches away from such a modification.

The examiner also refers to Shalon, and asserts that "Shalon et al. discloses that it is advantageous to impart an open-cell structure to ah elastic foam spring." However, Shalon relates to a non-analogous art. Shalon is concerned with a ***capillary printing system***, and is not at all related to a type of resilient body according to the present application that can be applied in cushions, mattresses, or the like. It is respectfully submitted that a person skilled in an art related to cushions, mattresses, or the like, would not turn to Shalon, or any other reference describing a capillary printing system, for teachings relating to the manufacture of cushions, mattresses, or the like.

It is respectfully submitted that the examiner's citation of Shalon, which is in no way at all related to the field of the resilient body of the present invention, illustrates that the examiner has resorted to hindsight based upon applicant's disclosure. The teaching or suggestion to make the claimed combination and the reasonable expectation of success

must both be found in the prior art, and ***not based on applicant's disclosure***. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

It is respectfully submitted that, for at least these reasons, the cited references fail to form a prima facie case of obviousness of claim 1 because 1) the cited references, even taken together, fail to teach or suggest each and every element set forth in claim 1; 2) there is no motivation or suggestion for combining or modifying the cited references in a manner to arrive at the present invention (and some of the references teach away from any such combination or modification); and 3) the cited references provide no expectation of success in any such combination. Accordingly, it is respectfully submitted that claim 1 and dependent claims 3-5 are allowable, and withdrawal of the rejection is requested.

Conclusion

In view of the foregoing remarks, it is respectfully submitted that the application is in condition for allowance. Accordingly, it is requested that claims 1 and 3-5 be allowed and the application be passed to issue.

If any issues remain that may be resolved by a telephone or facsimile communication with the Applicant's attorney, the Examiner is invited to contact the undersigned at the numbers shown.

Respectfully submitted,

BACON & THOMAS, PLLC
625 Slaters Lane, Fourth Floor
Alexandria, Virginia 22314-1176
Phone: (703) 683-0500

Date: June 8, 2006

JOHN R. SCHAEFER
Attorney for Applicant
Registration No. 47,921